

## Amendment

### In the Claims:

This listing of claims will replace without prejudice all prior versions and listings of claims in the application:

### **Listing of Claims:**

Claim 1 (cancelled)

Claim 2 (cancelled)

Claim 3 (cancelled)

Claim 4 (cancelled)

Claim 5 (cancelled)

Claim 6 (previously presented): A coaxial multiconductor plug and socket means,

    said plug means having at least three electrically conducting plug contacts thereon, adapted for insertion in socket means;

    said socket means having a corresponding number of electrically conductive socket contacts thereon;

        a first of said plug contacts electrically coupled to a second of said plug contacts via a plug-side current direction-limiting means;

        a first of said socket contacts electrically coupled to a second of said socket contacts via a socket-side current direction-limiting means;

    said first and second plug contacts adapted for electrical communication with said first and second socket contacts only upon proper engagement of said socket means with said plug means; and



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Patent Application of CAMWELL, Paul, et al.:

Serial No.: **10/655,028** Group Art Unit: **2836**  
Filed: **September 5, 2003** Examiner: **Daniel J. Cavallari**  
For: **MULTI-CONDUCTOR PLUG AND SOCKET APPARATUS**  
Date: **February 22, 2008** Docket No.: **A891743US**

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**MAIL STOP NON-FEE AMENDMENT**

The Commissioner of Patents and Trademarks  
Washington, D.C.  
United States of America 20231

**Response to Official Action**

Sir:

In response to the Examiner's final office action dated November 27, 2007, Applicant submits the following Amendments and Remarks:

**I. Amendments to the Claims** are reflected in the listing of claims that begins on page 2 of this paper.

**II. Remarks** begin on page 7 of this paper.

circuit isolation means, said circuit isolation means only permitting flow of electrical current through one or more remaining plug-socket contact pairs when current flow through at least one of said plug-side and socket-side current direction-limiting means is detected.

**Claim 7 (original):** The multiconductor plug and socket means as claimed in claim 6, wherein said circuit isolation means comprises plug-side circuit isolation means, said plug-side circuit isolation means only permitting flow of electrical current to at least one remaining plug contact when current flow through said socket-side current direction-limiting means is detected.

**Claim 8 (original):** The multiconductor plug and socket means as claimed in claim 6, wherein said circuit isolation means comprises socket-side circuit isolation means, said socket-side circuit isolation means only permitting flow of electrical current to at least one remaining plug contact when current flow through said plug-side current direction-limiting means is detected.

**Claim 9 (original):** The multiconductor plug and socket means as claimed in claim 6, wherein said circuit isolation means comprises:

  plug-side circuit isolation means, said plug side circuit isolation means only permitting flow of electrical current to at least one remaining plug contact when current flow through said socket-side current direction-limiting means is detected; and

  socket-side circuit isolation means, said socket-side circuit isolation means only permitting flow of electrical current to said at least one remaining plug contact when current flow through said plug-side current direction-limiting means is detected.

**Claim 10 (original):** The multiconductor plug and socket means as claimed in claim 6, 7, or 8 wherein said circuit isolation means includes a time delay circuit.

Claim 11 (original): The multiconductor plug and socket means as claimed in claim 6, 7, 8, or 9 wherein said current direction-limiting means is a diode.

Claim 12 (previously presented): A coaxial multiconductor plug and socket means, said plug means adapted for mating engagement with said socket means, comprising:

- (i) first and second plug contacts situate on said plug means, electrically coupled to each other via plug-side current direction-limiting means;
- (ii) first and second socket contacts, situate on said socket means and adapted to correspondingly come into electrical contact respectively with said plug contacts when said plug means is properly and fully engaged with said socket means, said first and second socket contacts electrically coupled to each other via socket-side current direction-limiting means;
- (iii) at least one additional plug contact and socket contact on each of said plug and socket means, respectively, each similarly adapted to come into electrical contact with each other when said plug means is fully engaged with said socket means;

wherein said plug and socket means are each adapted with circuit isolation means capable of only permitting flow of electrical current through said at least one additional plug and socket contact when current flow through at least one of said plug side and socket side current direction-limiting means is detected.

Claim 13 (original): The multiconductor plug and socket means as claimed

in claim 12, wherein said current direction-limiting means is a diode.

Claim 14 (previously presented): Apparatus for establishing coaxial electrical connection between a pair of electrical contacts, comprising:

    plug means;

    socket means;

    said plug means having one of said pair of electrical contacts thereon and a further first and second electrical plug contact thereon, said plug means adapted for insertion in said socket means;

    said socket means having the other of said pair of electrical contacts thereon, and a further first and second socket contact thereon;

    said first of said plug contacts electrically coupled to said second of said plug contacts via a plug-side current direction-limiting means;

    said first socket contact electrically coupled to said second of said socket contacts via a socket-side current direction-limiting means;

    said first and second plug contacts adapted for electrical communication with said first and second socket contacts only upon proper engagement of said socket means with said plug means; and

    circuit isolation means, said circuit isolation means only permitting flow of electrical current through said pair of electrical contacts when current flow is detected through at least one of said plug-side and socket-side current direction-limiting means.

Claim 15 (original): The apparatus as claimed in claim 14, wherein said current direction-limiting means is a diode.

Claim 16 (original): The apparatus as claimed in claim 14, wherein said circuit isolation means includes a time delay circuit.

Claim 17 (cancelled)

Claim 18 (previously presented) A multiconductor plug and socket means arrangement, said plug and socket means sharing a common axis, said plug means having a plurality of plug contacts thereon, adapted for insertion in said socket means, said socket means having a plurality of socket contacts disposed thereon corresponding to said plug contacts, comprising:

- a) a first plug contact of said plug contacts electrically coupled to a first diode, and at least one other plug contact electrically coupled to plug isolation means;
- b) a first socket contact of said socket contacts electronically coupled to a second diode, and at least one other socket contact electronically coupled to socket isolation means;
- c) the plug isolation means activated only when the second diode is detected by the full engagement of the plug and socket so as to then permit electrical current to flow to and/or from said at least one other plug contact thereon; and
- d) the socket isolation means activated only when the first diode is detected by the full engagement of the plug and socket so as to then permit electrical current to flow to and/or from said at least one other socket contact thereon.

Claim 19 (cancelled)

Claim 20 (cancelled)